

CLAIMS

1. A picture processing apparatus, comprising:
a light receiving portion for generating an
electric signal corresponding to intensity of received

light;

an amplifying portion for amplifying an
output signal of said light receiving portion;

a plurality of storing portions for storing
as a current signal an electric signal amplified by
said amplifying portion;

a load portion for converting current outputs
of said plurality of storing portions into voltages;

a bias portion for supplying an offset
current to an input of said load portion;

a calculating portion for calculating an
output signal of said load portion; and

an outputting portion for outputting a
calculated result of said calculating portion to the
outside.

2. The picture processing apparatus as set forth
in claim 1,

wherein the plurality of storing portions
store current signals corresponding to the received
light in different periods, and

wherein said calculating portion performs a
calculating process such as an addition, a subtraction,
or a comparison for the voltage signals based on the

current signals extracted from at least two of said plurality of storing portions.

3. The picture processing apparatus as set forth in claim 1,

5 wherein said amplifying portion contains mirror transistors that are connected so that their gate electrodes face each other and amplify the current signals based on the theory of current mirror.

10 4. The picture processing apparatus as set forth in claim 1,

wherein said storing portion stores the current signals based on the theory of current copier.

15 5. The picture processing apparatus as set forth in claim 1,

20 wherein when said calculating portion compares the signal currents supplied from two of said plurality of storing portions, said bias portion adds an offset current to a signal current supplied from one of the two storing portions and does not add the offset current to the signal current supplied from the other storing portion.

25 6. A photographing device having a plurality of pixels, arranged on the same circuit in a matrix shape, for detecting brightness of an object, each of the pixels comprising:

a light receiving portion for generating an electric signal corresponding to intensity of received

light;

an amplifying portion for amplifying an
output signal of said light receiving portion;

a plurality of storing portions for storing
as a current signal an electric signal amplified by
said amplifying portion;

a load portion for converting current outputs
of said plurality of storing portions into voltages;

a bias portion for supplying an offset
current to an input of said load portion;

a calculating portion for calculating an
output signal of said load portion; and

an outputting portion for outputting a
calculated result of said calculating portion.

7. The photographing device as set forth in
claim 6,

wherein the plurality of storing portions
store current signals corresponding to the received
light in different periods, and

wherein said calculating portion performs a
calculating process such as an addition, a subtraction,
or a comparison for the voltage signals based on the
current signals extracted from at least two of said
plurality of storing portions.

8. The photographing device as set forth in
claim 6,

wherein said amplifying portion contains

mirror transistors that are connected so that their gate electrodes face each other and amplify the current signals based on the theory of current mirror.

9. The photographing device as set forth in claim 6,

wherein said storing portion stores the current signals based on the theory of current copier.

10. The photographing device as set forth in claim 6,

wherein when said calculating portion compares the signal currents supplied from two of said plurality of storing portions, said bias portion adds an offset current to a signal current supplied from one of the two storing portions and does not add the offset current to the signal current supplied from the other storing portion.

11. A photographing device for detecting brightness of an object, comprising:

a pixel area in which pixels are arranged in a matrix shape, each pixel being composed of a light receiving portion for generating an electric signal corresponding to intensity of received light and an amplifying portion for amplifying an output signal of the light receiving portion;

a second amplifying portion area in which second amplifying portions are arranged in each column of the pixels in said pixel area, each of the second

amplifying portions amplifying a current signal based on the theory of current mirror of mirror transistors that are connected so that their gate electrodes face each other;

5 a pixel-outside storing area in which a plurality of storing portions are arranged in a matrix shape corresponding to the arrangement of the pixels in said pixel area, each of the storing portions storing as a current signal an electric signal that has been amplified;

10 a load portion and calculating portion area in which load portions and calculating portions are arranged in each column of the pixels of said pixel area, each of the load portions converting the current output of the corresponding storing portion into a voltage, each of the calculating portions performing a calculating process; and

15 an outputting portion area in which outputting portions are arranged in each column of the pixels of said pixel area, each of the outputting portions outputting the calculated result of the corresponding calculating portion,

20 wherein said pixel area, said second amplifying portion area, said pixel-outside storing area, said load portion and calculating portion area, and said outputting portion area are disposed on the same circuit.

12. The photographing device as set forth in claim 11,

wherein the storing portions store current signals corresponding to the received light in different periods, and

wherein the calculating portions perform a calculating process such as an addition, a subtraction, or a comparison for the voltage signals corresponding to the current signals extracted from two or more of the storing portions.

13. The photographing device as set forth in claim 11, further comprising:

a bias portion for adding an offset current to an output current of the corresponding storing portion.

14. The photographing device as set forth in claim 13,

wherein when said calculating portion compares the signal currents supplied from two of said plurality of storing portions, said bias portion adds an offset current to a signal current supplied from one of the two storing portions and does not add the offset current to the signal current supplied from the other storing portion.

15. The photographing device as set forth in claim 11,

wherein said storing portion stores the

current signals based on the theory of current copier.

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